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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/733,072	10/16/1996	KAMBIZ B. MAKOU	0286-1156	8652

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EXAMINER

YAN, REN LUO

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

08/733,072

Applicant(s)

MAKOUJ ET AL.

Examiner

Ren L Yan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 18-22, 25-30, 33-41, 49-61, 69-72 and 75-77 is/are pending in the application.
- 4a) Of the above claim(s) 22 and 25-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 18-21, 33-41, 49-61, 69-72 and 75-77 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1-8-2003 has been entered.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 8, 9, 18, 19, 33, 34, 40, 49, 50, 53, 54, 60, 69-72 and 75-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klemmer(3,731,620) in view of Saueressig(4,685,393), EP 181726 and Kildune(5,266,257). The patent to Klemmer teaches the very concept as disclosed and claimed in the present application to use a releasably attached sleeve 32 with engraved pattern thereon on a embossing roller 24 having a rigid core so as to facilitate the replacement of the engraved sleeve without having to remove the entire embossing roller from the machine. See column 5, lines 10-31 and column 7, lines 46-62 in Klemmer for details. Klemmer does not show in detail how the embossing sleeve is releasably mounted on the roller core. Saueressig teaches the structure and method of employing a printing roller sleeve positioning means for releasably attaching a printing sleeve 3 onto a roller core 2 using pressurized gas as recited including an axially extending bore 22 and circumferential grooves 24 extending to the surface of the core 2 for feeding the pressurized gas to the surface of the core 2

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in order to expand the printing sleeve 3 so as to facilitate positioning the sleeve 3 relative to the core 2. See the entire Saueressig reference for example. EP 181726 teaches a printing roll with a detachable sleeve the conventionality of providing a keyway(100, 102) on the roll core 6 to be mated with a key(101, 105) on the inner surface of sleeve 1 so as to prevent rotation of the sleeve relative to the core. See Figs. 3 and 4 in EP 181726 for example. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the embossing roller of Klemmer with the properly disposed structure for providing pressurized gas as taught by Saueressig so as to facilitate the mounting and removing of the embossing sleeve and with key and keyway formations on the sleeve and roller core, respectively, as taught by EP 181726 in order to prevent rotation of the sleeve relative to the core when subjected to high printing pressure. With respect to claims 2, 34 and 54, to form the rigid core 24 of Klemmer with steel for its known rigidity would have been most obvious to one of ordinary skill in the art. With respect to the broadly recited embossing pattern includes embossing elements having one of various recited shapes, since the particular laser engraving technique on the embossing sleeve is not disclosed and claimed as part of the present invention, the various shapes of the embossing elements in the embossing pattern are considered as a design preference based on the embossed images desired to be obtained. Such a design preference by those having ordinary skill in the art would involve no apparent unobviousness. For example, the patent to Kildune teaches an embossing roll 32 with an embossing pattern including embossing elements 12' having curvilinear side walls so as to create the same embossed pattern on a passing film 36. See Fig. 5 in Kildune. It would have been obvious to those having ordinary skill in the art to provide the embossing roller sleeve of Klemmer, as modified by the applied prior art references, with the

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embossing pattern and elements having curvilinear side walls appropriately disposed as taught by Kildune when such an embossing pattern is desired to be created on a substrate. With respect to claims 18, 49 and 69, the depth of such a groove would have been ultimately determined by those having ordinary skill in the art through routine experiment in order to achieve a desired outcome. Such a determination based on routine experiment would have been obvious to those skilled in the art. Regarding claims 33, 53, 76 and 77, the recited web material supply, feed and take-up means are all clearly shown in Fig. 1 in Klemmer.

Claims 20, 21, 51, 52, 71 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klemmer in view of Saueressig, EP 181726 and Kildune as applied to claims 1, 33 and 53 above, and further in view of Julian(4,144,813). Klemmer, as modified by Saueressig, EP 181726 and Kildune may not show the use of tapered roller core and sleeve. Julian teaches in a similar roller structure using pressurized gas to facilitate mounting of the sleeve the conventionality of using tapered roller core outer surface 11 and sleeve inner surface 5 so as to facilitate the mounting and detachment of the sleeve relative to the roller core. See the entire Julian reference for example. In view of the teaching of Julian, it would have been obvious to one of ordinary skill in the art to provide the roller core and sleeve inner surface of Klemmer, as modified by Saueressig, EP 181726 and Kildune, with tapered mating surfaces in order to ease the sleeve mounting operation.

Claims 3-7, 35-39 and 55-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klemmer in view of Saueressig, EP 181726 and Kildune as applied to claims 1, 33 and 53 above, and further in view of Kildune(5,266,257). Klemmer, as modified by the applied prior art references, may not disclose the material used for the engraved sleeve. Kildune discloses in the

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paragraph bridging columns 1 and 2 that it is conventional to provide an embossing roller core with a vulcanized rubber sleeve to carry out the embossing function. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the embossing roller of Klemmer with a vulcanized rubber sleeve as taught by Kildune. The mere application of a known material based upon its well known properties and intended use by those having ordinary skill in the art in order to obtain an expected outcome would involve no apparent unobviousness. With respect to the recited sleeve hardness in claims 3-5, 35-37 and 55-57, since the applied prior art references use the same material, it would appear that the broad hardness range as recited would inherently be met. Besides, due to the lack of disclosure showing any criticality, the hardness of the embossing sleeve employed would be determined based upon the type of material to be embossed, etc. and such a determination would be made by those having ordinary skill in the art through routine experiment in order to obtain the desired embossing outcome.

Claims 10, 41 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klemmer in view of the applied prior art as applied to claims 9, 40 and 60 above, and further in view of Jones(3,404,254). Klemmer, as modified by the applied references, may not disclose how the sleeves are engraved. Laser engraving on the surface of cylindrical rollers has long been known and used in the art for its ability to generate accurate and sharp images. Jones teaches such a conventional use of laser engraving on cylindrical shaped roller bodies. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use laser technology to engrave the embossing pattern on the sleeve of Klemmer, as modified by the applied references, as taught by Jones in order to achieve improved image pattern on the sleeve.

Applicant's request for reconsideration and accompanying arguments filed on 1-8-2003 have been fully considered but they are not persuasive.

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Applicants argued that the applied secondary prior art references are from the printing art and thus are nonanalogous to embossing art, and stated that the pressure between rollers is much greater during embossing than in printing. This argument is not persuasive. There is no disclosure what so ever in the present application to indicate that the inventors of present application are concerned about the greater pressure existed between the rolls during the embossing operation. As a matter of fact, applicants admitted in the Background section of the specification that US patent No. 5,269,983 (belongs to the same assignee as the present application) teaches the use of rubber-to-steel mated embossing rolls to achieve highly defined embossed pattern on paper product such as napkins and tissues without requiring a large amount of force or pressure. Therefore, the argument based on this "greater pressure" for embossing at this stage of the prosecution is only self-serving. The argument that printing and embossing are non-analogous arts are also not agreed to by the Examiner. Embossing is in fact a form of printing and the embossing art is classified under Class 101 PRINTING in the U.S. Patent Classification System. The interchangeability of the embossing sleeves on the embossing roll would cut cost and reduce down time comparing with the more conventional use of steel embossing roll which would require costly re-engraving the embossing pattern. The applied primary Klemmer reference taught just the same concept for an embossing roll and the applied secondary prior art references are relied upon to show the conventional ways to removably slide the sleeve on and off the printing roll and the use of key way to fix the sleeve on the printing roll the same way as the applicants of the present application tried to do for an embossing roll. Since all of the applied prior art show close similarities in structure and function as that of the present invention, they are undoubtedly considered as being analogous art.

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Applicant's argument that Klemmer teaches away from the use of air pressure in embossing processes is grossly misconstrued. Klemmer's discussion about the problems associated with the use of air pressure in column 2, lines 30-33 is referring to a pneumatic lift device for positioning the backup roll 26 with respect to the embossing roll 24 and Klemmer in column 3, lines 10-45 suggested the use of a hydraulic-pneumatic power lift arrangement to be connected to the opposite ends of the shaft supporting the backup roll as an improvement. Klemmer's discussion regarding the use of air pressure has nothing to do with how the embossing sleeve is mounted onto and removed from the roller core. As pointed out by the Examiner that Klemmer does not show in detail how the embossing sleeve is releasably mounted on the roller core, Klemmer certainly does not teach away from using pressurized air for releasably mounting the embossing sleeve on the roller core as alleged by the applicant.

Once it is established that Klemmer does not teach away from using pressurized air for mounting the embossing sleeve, the argument that Klemmer cannot be combined with Saueressig or EP 181,726 because it teaches away from using pressurized air should fall as well.

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ren L Yan whose telephone number is 703-308-0978. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on 703-305-6619. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.



Ren L Yan
Primary Examiner
Art Unit 2854

Ren Yan
March 21, 2003